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Waterhemp breaking through soybean canopy

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Abstract
The past week I received several calls concerning waterhemp that was just beginning to break through the soybean canopy. The callers were wondering whether it is worth making another application for these weeds; the answer is "no." They also wanted to know what would be the best option for control, but there aren't any.

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 [1] **A stand of waterhemp.**

The reason for discouraging applications at this time is based on three factors. First, it is unlikely that these plants will have a significant impact on soybean yields. In most situations, waterhemp that is breaking through the soybean canopy at this time either emerged several weeks after the soybean or was suppressed by a sublethal herbicide application. Both of these factors give soybeans a competitive advantage over the weed. The Iowa Soybean Promotion Board is funding a research project investigating the effect of delayed waterhemp emergence on its competitiveness with soybeans. This research has found that waterhemp plants that emerge after the V2 stage of soybean generally will not affect yields. In our research plots this year, waterhemp that emerged at the V3-V4 stage of soybean is just beginning to poke through the soybean canopy. Waterhemp plants that emerged close to the time of soybeans (i.e., plants that will be competitive with the crop), broke through the soybean canopy in early July. Thus, the plants you are beginning to see now had a late start with the soybean and therefore should be noncompetitive.

The second reason for not spraying these fields is that it is unlikely that successful control will be achieved. Although occasionally large waterhemp can be killed, in most situations the only thing accomplished is burning off the upper 6-8 inches of the weed. This probably will have little effect on seed production of the waterhemp or harvesting efficiency, two other concerns with these plants.

Finally, herbicide applications made at this time are much more likely to impact soybean yields than treatments made during vegetative periods of growth. It is basically a lose-lose situation; you are unlikely to kill the waterhemp and there is a good possibility of reducing soybean yields.

In conclusion, waterhemp that is breaking through the soybean canopy at this time is unlikely to impact yields due to the competitive advantage of the soybeans. Although these weeds are capable of producing a large amount of seed that will create problems in subsequent years, it is unlikely that herbicide treatments at this time will kill these plants or greatly reduce

their seed production potential. The key to successful management is to closely scout soybean fields known to have heavy waterhemp populations throughout June and July to detect the waterhemp plants before they reach the stage where you can see them from the road.

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